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WATER QUALITY/LAND DISPOSED SOLID WASTE:

A BIBLIOGRAPHY

A Division of Technical Operations
Open-File Report (SW-85ts.of)

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Solid Waste Management Office
1971

PREFACE

This bibliography was developed to serve as a guide to some of the literature available on the pollution of ground and surface waters by solid waste.

The original list of literature was obtained from the Bureau of Solid Waste Management's Solid Waste Information Retrieval System. This list was then expanded upon to meet the needs of ongoing projects. The expanded list was used to prepare this bibliography.

Manpower limitations precluded the complete abstracting of each item listed herein. We considered it desirable, however, to compile a single listing of most of the literature available on this subject. In lieu of abstracting, we felt that categorizing the items would add to the value of the bibliography.

Thus, six categories were selected to represent more specific areas of interest. Each listed item was reviewed and placed in one or more of the following six categories in accordance with its content:

I. GENERAL THEORY--contains discussion of technical aspects, theory, of the topic.

II. GROUND WATER QUALITY DATA--specific data on affected ground water is presented.

III. SURFACE WATER QUALITY DATA--specific data on affected surface water is presented.

IV. RESEARCH PERCOLATION QUALITY DATA--specific data obtained from research percolation studies is presented.

V. GENERAL DISCUSSION--concepts are presented and discussed in a general manner.

VI. WATER TREATMENT--the treatment of affected water is discussed.

Readers are urged to routinely add to this bibliography other literature which becomes available, thereby maintaining a viable working bibliography.

I. GENERAL THEORY

1. American Society of Civil Engineering Committee on Sanitary Engineering Research, 1961. A survey of sanitary landfill practices. Journal of the Sanitary Engineering Division, Proc. ASCE, 87(SA4):65-84, July 1961.

2. Anderson, J. R., and J. N. Dornbush. Influence of sanitary landfill on ground water quality. Journal of the American Water Works Association, 59(4):457-470, Apr. 1967.

3. Bergstrom, R. E. Disposal of wastes: scientific and administrative considerations. Environmental Geology Notes Series No. 20. Illinois State Geological Survey. Jan. 1968.

4. Cartwright, K., and M. R. McComas. Geophysical surveys in the vicinity of sanitary landfills in northeastern Illinois. Ground Water, 6(5):22-30, Sept.-Oct. 1968.

5. Cartwright, K., and F. B. Sherman. Evaluating sanitary landfill sites in Illinois. Environmental Geology Notes Series No. 27. Illinois State Geological Survey, Aug. 1969. 15 p.

6. Cook, H. A., D. L. Cromwell, and H. A. Wilson. Microorganisms in household refuse and seepage water from sanitary landfills. In Proceedings; West Virginia Academy of Science, 39:107-114, 1967.

7. Cornelius, J., and L. Burch. Solid wastes and water quality, a study of solid waste disposal and their effect on water quality in the San Francisco Bay-Delta area. California State Department of Health, 1968. 240 p.

8. County of Los Angeles, and Engineering Science, Inc. Development of construction and use criteria for sanitary landfills; an interim report on solid waste demonstration grant project No. DO1-UI-00046. [Cincinnati.] U.S. Department of Health, Education, and Welfare, August 1969. 267p.

9. Culham, W. B., and R. A. McHugh. Leachate from landfills may be new pollutant. Journal of Environmental Health, 31(6):551-556, May-June 1969.

10. Dunn, W. L. Refuse filling of a swamp in a fresh water lake. Civil Engineering, 38(1):60, p. 60-62. Jan. 1968.

11. Eldredge, R. W., and H. J. Dominick. 1963-1964 Refuse disposal study: Winnebaga County, Illinois. 1964. p. 1-39.

12. Emrich, G. H., and R. A. Landon. Generation of leachate from landfills and its subsurface movement. In Annual Northeastern Regional Anti-Pollution Conference, University of Rhode Island, July 1969.

13. Engineering-Science, Inc. In-situ investigation of movements of gases produced from decomposing refuse. Publication No. 35. California State Water Quality Control Board, Apr. 1967. 105 p.

14. Farvolden, R. N., and G. M. Hughes. Hydrogeologic aspects of landfill design. In Proceedings; 16th Ontario Industrial Waste Conference, June 1969. p. 43-50.

15. Farvolden, R. N., and C. M. Hughes. Sanitary landfill design. Industrial Water Engineering, 6(8):26-28, Aug. 1969.

16. Fungaroli, A. A., R. L. Steiner, and I. Remson, eds. Design of a sanitary landfill laboratory lysimeter. Series 1, No. 9, Drexel Institute of Technology, July 1968. 27 p.

17. Gilbby, H. E. The disposal of house refuse, with reference to typing in rural areas. Royal Society for the Promotion of Health Journal, 75(8):555, Aug. 1955.

18. Hackett, J. E. Ground water contamination in an urban environment. Ground Water, 3(3):27-30, July 1965.

19. Hanks, T. G. Solid waste/disease relationships; a literature survey. Public Health Service Publication No. 999-UIH-6. Washington, U.S. Government Printing Office, 1967. 179 p.

20. Hughes, G.H. Selection of refuse disposal sites in northeastern Illinois. Environmental Geology Notes Series No. 17. Illinois State Geological Survey, Sept. 1967. 18 p.

21. Hughes, G. M., R. A. Landon, and R. N. Farvolden. Hydrogeology of solid waste disposal sites in northeastern Illinois; an interim report on a solid waste demonstration grant project. [Cincinnati.] U.S. Department of Health, Education, and Welfare, 1969. 137 p.

22. Influence of geology on site locations. In Quad-City solid wastes project; an interim report, June 1, 1966-May 31, 1967. Cincinnati, U.S. Department of Health, Education, and Welfare, 1968. p. 4-1--4-23.

23. Engineering Science, Inc., In-situ investigation of movements of gases produced from decomposing refuse. Publication No. 31. Sacramento, California State Water Quality Control Board, 1965. 211 p.

24. Landon, R. A. Application of hydrogeology to the selection of refuse disposal sites. In Proceedings; Second Mid-Atlantic Industrial Waste Conference, Nov. 1968. Philadelphia, Drexel Institute of Technology. p. 278-286.

25. Langer, W. Effect of solid waste dumping on surface and underground water. [original text in German language.] Bundesgesundheitsamt, Institut fur Wasser-, Boden- and Lufthygiene.

26. Lin, Y. H. Acid and gas production from sanitary landfills. Ph.D. Thesis. West Virginia University, Morgantown, 1966.

27. Locate waste dumps with care. Johnson National Drillers' Journal, July-Aug. 1955. p. 4,5.

28. Location of refuse disposal sites. Wasser-Abwasser (Munich), 106(8):233, Feb. 26, 1965.

29. Merz, R. C. The effects of the sanitary landfill on the ground water at Riverside. Western City, Apr. 1955.

30. Orderly and controlled deposition of industrial waste. Stradtehygiene (Uetzen/Hambury), 16(12):272-275, Dec. 1965.

31. Pollution of water by tipped refuse. Ministry of Housing and Local Government, Her Majesty's Stationery Office, London, 1961. 141 p.

32. Quasim, S. R. Chemical characteristics of seepage water from simulated landfills. Ph.D. Thesis. West Virginia University, Morgantown, 1965. 145 p.

33. Rawn, A. M. Report on probable ground water pollution from rubbish dumps. In Report upon the collection and disposal of refuse in the county sanitation districts of Los Angeles County, California. Los Angeles County Sanitation Districts, Oct. 1950. 141 p.

34. Remson, I., A. A. Fungaroli, and A. W. Lawrence. Water movement in an unsaturated sanitary landfill. Journal of the Sanitary Engineering Division, Proc. ASCE, 94(SA2): p. 307-317, Apr. 1968.

35. Salvato, J. A., W. G. Wilkie, and B. E. Mead. Sanitary landfill leachage prevention and control. New York State Department of Health, 1970.

36. Sata, K. M. Sanitary landfill leachates. M. S. Thesis. Oklahoma State University, Stillwater, July 1970. 59 p.

37. Sawinski, R. J. Ground water quality variation of a refuse landfill. M.S. Thesis. South Dakota State University, Brookings, 1966. 93 p.

38. Schoenberger, R. J. Chemical characteristics of leachate from an incinerator residue landfill. In Proceedings; Second Mid-Atlantic Industrial Waste Conference, Nov. 1968. Drexel Institute of Technology. p. 287-300.

39. Sheaffer, J. R., B. von Boehm, and J. E. Hackett. Refuse disposal needs and practices in northeastern Illinois metropolitan plan. Technical Report No. 3. Northeastern Illinois Metropolitan Area Planning Commission, 1963. 72 p.

40. State of California Department of Water Resources. Sanitary landfill studies. Appendix A: Summary of selected previous investigations. Bulletin No. 147-5. Sacramento, July 1969. 115 p.

41. State of California Water Pollution Control Board. Effects of refuse dumps on ground water quality. Publication No. 24. Sacramento, 1961. 107 p.

42. State of California Water Pollution Control Board. Report on investigation of the leaching of sanitary landfill. Publication No. 10. Sacramento, 1954. 92 p.

43. Sumner, J. Technical developments in refuse collection and disposal. Chartered Municipal Engineer, 91(3):95-101, Mar. 1964.

44. Survey of landfill characteristics, New York City. New York City Department of Sanitation, Feb. 1941.

45. Xanten, W. A. Refuse disposal--site location problems. In Proceedings; First Annual Meeting of the American Public Works Association, Institute for Solid Wastes, Chicago, Sept. 13-15, 1966. p. 16-18.

II. GROUND WATER QUALITY DATA

46. American Society of Civil Engineers. Sanitary landfill. In Manuals of Engineering Practice. No. 39. New York, 1959.

47. Anderson, J. R., and J. N. Dornbush, eds. Quality changes of shallow ground water resulting from refuse disposal at a gravel pit. Brookings, South Dakota State University, Nov. 1968.

48. Beck, W. M. Interim Report. Bureau of Solid Waste Management Virginia Beach Demonstration Project No. 5-D01-UI-00045-02, Dec. 1968.

49. Burchinal, J. C., and S. R. Quasim. 1967 Sanitary landfill investigations. In Proceedings: Engineering Foundation Research Conference on Solid Waste Research and Development, University School, Milwaukee, July 24-28, 1967. Preprint No. B-3.

50. Carpenter, L. V., and L. R. Setter. Some notes on sanitary landfills. American Journal of Public Health, Apr. 1940. p. 385-393.

51. Hughes, G. M., R. A. Landon, and R. N. Farvolden. Hydrogeologic data from four landfills in northeastern Illinois. Environmental Geology Notes Series No. 26. Illinois State Geological Survey, Mar. 1969.

52. Hughes, G. M., R. N. Farvolden, and R. A. Landon. Hydrogeology and water quality at a solid waste disposal site. In Proceedings; 7th Annual Engineering Geology and Soils Engineering Symposium, Moscow, Idaho, Apr. 1969. Idaho Department of Highways.

53. Lane, B. E., and R. R. Parizek. Leachate movement in the sub-soil beneath a sanitary landfill trench traced by means of suction lysimeters. In Proceedings; Second Mid-Atlantic Industrial Waste Conference, Nov. 1968. Drexel Institute of Technology.

54. Lang, A. Pollution of water supplies, especially of underground streams, by chemical wastes and by garbage. Zeitschrift fur Gesundheitstechnik und Stadtehygiene (Ger.), 24(5):174, May 1932; abstracted, Journal of American Water Works Association, 25(8):1181, Aug. 1933.

55. Longwell, J. The water pollution aspect of refuse disposal. Proceedings; Institution of Civil Engineers, 8(6261):420-424, 1957.

56. Newberger, J. W., and R. J. Berah. Final project report sanitary landfill demonstration of a gully reclamation method. Sarpy County, Nebr., 1968. U.S. Public Health Service Demonstration Grant No. 5-D01-UI-00011-03.

57. Shields, W. H., Jr., and G. W. Barstow. Use of abandoned strip mines for waste disposal in Maryland, U.S. Public Health Service Demonstration Grant No. D01-UI-00048, Oct. 1968.

58. State of California Water Pollution Control Board. Report on the investigation of leaching of ash dumps. Publication No. 2. Sacramento, 1952. 100 p.

59. Straughn, R. O. Refuse landfill study of Eielson Air Force Base. Arctic Health Research Lab, 1968. Internal report.

60. Walker, W. H. Illinois ground water pollution. Journal American Water Works Association, 61(1):31-40, Jan. 1969.

61. Weaver, L. Refuse disposal, its significance. In Ground Water Contamination; Proceedings of the 1961 Symposium, Cincinnati, April 5-7, 1961. Technical Report W61-5. Robert A. Taft Sanitary Engineering Center. p. 104-110.

62. Zanoni, A. E. Ground water pollution from sanitary landfills and refuse dump grounds--a critical review. State of Wisconsin Department of Natural Resources, July 1970. 99 p.

Also, items 1., 2., 4., 8., 11., 13., 20., 21., 24., 25., 27., 29., 33., 37., 38., 40., 41., 42., and 44.

III. SURFACE WATER QUALITY DATA

63. Anderson, J. R., and J. N. Dornbush, eds. Quality changes of shallow ground water resulting from refuse disposal at a gravel pit. Brookings, South Dakota State University, Nov. 1968.

64. Furness, J. F. Disposal of household refuse in wet gravel pits. Public Cleansing, May 1967. p. 255-259.

65. McDermott, G. Pollutional characteristics of landfill drainage. EHC Activity Report No. 3. R. A. Taft Sanitary Engineering Center, Cincinnati, Jan.-Mar. 1950.

66. Pollution of water by tipped refuse. Ministry of Housing and Local Government, Her Majesty's Stationery Office, London, 1961. 141 p.

Also, items 6., 7., 9., 21., 44., 46., 49., 55., 56., and 57.,

IV. RESEARCH PERCOLATION QUALITY DATA

67. Cook, H. A. Microbiological and chemical investigation of seepage from a sanitary landfill. M.S. Thesis. West Virginia University, Morgantown, 1965.

68. Drexel University. Final report. v. land 2. Pollution of subsurface water by sanitary landfill. PHS Grant No. 5-R01-UI-00516, Oct. 1, 1967-Dec. 31, 1968.

69. Ellis, H. M. Influence of dumps of solid domestic and industrial refuse on surface and underground water; British research and practical experience. Public Cleansing, June 1965. p. 378-380.

70. Honda, A., K. Kondo, Z. Inove, and H. Ito. Decomposition of compressed mass of waste and water contamination. Institute of Resources Research of Japan, Osaka Municipal Hygenic Laboratory.

71. Lin, Y. H. Acid and gas production from sanitary landfills. Ph.D. Thesis. West Virginia University, Morgantown, 1966.

72. Merz, R. C., and R. Stone. Progress report on study of percolation through a landfill. Public Works, 98(12):86, 87, 148, 149, Dec. 1967.

73. Steiner, R. L., and A. A. Fungaroli. Construction of laboratory and field facilities for the investigation of leaching from sanitary landfills. In Proceedings; Second Mid-Atlantic Industrial Waste Conference, Nov. 1968. Drexel Institute of Technology. p 301-324.

Also items 8., 13., 32., 36., 38., 41., 42., 53., 55., 58., 64., and 66.

V. GENERAL DISCUSSION

74. American Public Works Association, Committee on Refuse Disposal. Municipal refuse disposal. 2d ed. Chicago, Public Administration Service, 1966. 528 p.

75. Black, R. J. A report on the feasibility of using sites with high ground water for sanitary landfill operations in Broward County, Florida. U.S. Department of Health, Education, and Welfare, 1962.

76. Burch, L.A. Solid waste disposal and its effect on water quality. California Vector Views, 16(11):99-113, Nov. 1969.

77. Cummins, R. L. Effects of land disposal of solid wastes on water quality. Cincinnati, U.S. Department of Health, Education, and Welfare, 1968. 29 p.

78. Dunn, W. L. Storm drainage and gas burning at a refuse disposal site. Civil Engineering, 30(8):68-69, Aug. 1960.

79. Fungaroli, A. A., and R. L. Steiner, Analytical procedures for chemical pollutants. Series 1, No. 8. Drexel Institute of Technology, 1968.

80. Fungaroli, A. A., and R. L. Steiner, Design of a sanitary landfill field experiment installation. Series 1, No. 10. Drexel Institute of Technology, 1968.

81. Gilbby, H. E. The disposal of house refuse, with reference to typing in rural areas. Royal Society for the Promotion of Health Journal, 75(8):555, Aug. 1955.

82. Ham, R. K. Large elevation landfilling for refuse disposal. Public Works, 101(1):91-94, Jan. 1970.

83. McKee, J. E., W. L. Faith, H. Heukelekian, T. F. Mancuso, E. M. Mrak, and C. N. Sawyer, eds. One hundred problems in environmental health; a collection of promising research problems. Washington, Jones Composition Company and Kirby Lithograph Company, 1961.

84. McKee, J. E. Research needs in ground water pollution. Journal of the Water Pollution Control Federation, 33(12):1227-1233, Dec. 1961.

85. Sanitary landfills. Canadian Municipal Utilities, 102(12):18-22, 50-52, Dec. 1964.

86. Sorg, T. J., and H. L. Hickman, Jr. Sanitary landfill facts. 2d ed. Public Health Service Publication No. 1792. Washington, U.S. Government Printing Office, 1970. 30 p.

Also, items 3., 5., 7., 8., 10., 12., 18., 19., 20., 21., 24., 27., 32., 33., 36., 41., 46., 47., 49., 50., 54., 55., 60., 61., 64., and 68.

VI. WATER TREATMENT

87. Matusky, F. E., and R. K. Hampton. Incinerator waste water. In Proceedings; 1968 National Incinerator Conference, New York, May 5-8, 1968. American Society of Mechanical Engineers. p. 198-203.

Also, items 5., 24., 47., 56., 67., 68., 70., and 79.

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